

b) contacting said at least one analyte-carrying solid [support(s)] support with targets provided in a semi-solid or liquid medium, whereby said analytes are released from the at least one solid [support(s)] support to the targets; and

c) measuring analyte-target interactions.

2. (Amended) A method according to Claim 1, wherein step (a) comprises (i) disposing the analytes within individually identifiable containers, and (ii) transferring the analytes from the containers to the at least one solid [support(s)] support in such a manner as to maintain the transferred contents of each container separate from those of each other container.

4. (Amended) A method according to Claim 3, wherein the individually identifiable containers are an array of capillary tubes each of which is identifiable according to its position within the array, and wherein transfer of the analytes to the at least one solid [support(s)] support occurs by dispensing thereof through the open ends of the capillary tubes.

5. (Amended) A method according to [any one of Claims 1-4] Claim 1, wherein the solid support is of a substantially flat, disc-, rectangular- or square-shape.

6. (Amended) A method according to Claim 5, wherein the solid support comprises a material which allows for spontaneous release of the [analyte(s)] analytes when applied thereto.

7. (Amended) A method according to Claim 5, wherein the solid support comprises a material which allows for controlled release of the [analyte(s)] analytes when applied thereto.

8. (Amended) A method according to Claim 6 [or 7], wherein said material is said semi-solid medium.

9. (Amended) A method according to [any preceding claim] Claim 1, wherein when each analyte is applied to the solid support it diffuses thereon so as to produce a concentration gradient.

10. (Amended) A method according to [any preceding claim] Claim 1, wherein the surface of the solid support onto which the analytes are applied is selected from polymers, ceramics, metals, cellulose and glass.

11. (Amended) A method according to [any preceding claim] Claim 8, wherein said semi-solid medium is disposed on a carrier.

12. (Amended) A method according to Claim 11, wherein the solid support is [in the form of] a flexible film or tape onto which the target-containing semi-solid medium is applied, whereby the method [can] may be automated using a system of rollers to progress the flexible film or tape through the various steps of the method.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

14. (Amended) A method according to Claim 12 [or 13], wherein the solid support or covering layer [(if present)] is provided with a track for the recordal of information regarding the applied analytes, whereby the information can be read and processed simultaneously with the measurement of analyte-target interactions in an automated process.

15. (Amended) A method according to [any one of Claims 1-10] Claim 1, wherein the solid support is [itself] a detector or forms part of a detector.

17. (Amended) A method according to [any preceding claim] Claim 1, wherein the surface of the solid support is coated with a membrane, a molecular monolayer, a cellular monolayer or a Langmuir-Blodgett film.

18. (Amended) A method according to [any preceding claim] Claim 1, wherein the solid support is [itself] an information carrier which carries information in electronic, magnetic or digitised form.

19. (Amended) A method according to [any preceding claim] Claim 17, wherein said surface of the solid support is reflective.

20. (Amended) A method according to Claim 19, [when dependent on Claim 17,] wherein said surface is the reflective surface of a compact disc.

22. (Amended) A method according to [any preceding claim] Claim 8, wherein the semi-solid medium comprises a substance which provides a semi-solid or viscous liquid environment allowing controlled release of said [anlaytes] analytes to said target.

24. (Amended) A method according to [any preceding claim] Claim 1, wherein steps a) and b) are carried out simultaneously.

27. (Amended) A method according to Claim 25 [or 26], wherein each analyte-bearing solid support is contacted in step b) with a target in a separate compartment of a multi-compartmented apparatus.

29. (Amended) A method according to [any preceding claim] Claim 1, wherein the analytes are selected from chemical compounds, antigens, antibodies, DNA-probes, cells and beads and liposomes carrying an analyte of interest.

32. (Amended) A method according to [any one of Claims 29-31] Claim 1, wherein the analyte is a chemical compound.

33. (Amended) A method according to [any preceding claim] Claim 1, wherein said targets are selected from prokaryotic cells, eukaryotic cells, viruses, molecules, receptors, beads, and combinations thereof.

36. (Amended) A method according to [any preceding claim] Claim 1, wherein said analyte-target interactions are measured using one or more of the following methods: microscopic, colorimetric, fluorometric, luminometric, densitometric, isotopic, and physical measurements.

38. (Amended) A method for the rapid screening of analytes, [which comprises] comprising:

a) bringing a first information carrier, in the form of a film or tape, having analytes to be screened applied to a surface thereof as discrete spots or lines, into contact with a second information carrier [,which carrier is] also in the form of a film or tape, having targets of interest embedded in a semi-solid matrix on a surface thereof;

b) winding the respective carriers with their respective analyte- and target-bearing surfaces in contact;

c) incubating the wound carriers under conditions at which the analytes are released from the first carrier to the target-bearing surface;

d) unwinding the first and second carriers; and

e) passing the second information carrier to an analysis and information reading

unit.

Please add new claims 45-68 as follows:

45. A method according to Claim 7, wherein said material is said semi-solid medium.

40/46. A method according to Claim 45, wherein said semi-solid medium is disposed on a carrier.

41/47. A method according to Claim 26, wherein each analyte-bearing solid support is contacted in step b) with a target in a separate compartment of a multi-compartmented apparatus.

42/48. A device for dispensing liquid, comprising:
an array of containers each configured to contain a liquid;
a housing adapted to contain the array of containers, the housing defining an area enclosed relative to an exterior of the housing; and
a support movable relative to the array to receive the liquid from the containers, wherein a pressure differential is created between the area and the exterior of the housing to cause the liquid to dispense onto the support.

43/49. The device of Claim 48 wherein the containers are tubes.

44/50. The device of Claim 48, wherein the containers are capillary tubes having open ends.

45/51. The device of Claim 48, wherein the containers are disposed in a concentric array.

46/52.

The device of Claim 48, wherein the containers are disposed in a spiral array.

47/53.

The device of Claim 48, wherein the containers are separated from the support.

48/54.

The device of Claim 48, wherein the support is positioned externally of the housing.

49/55.

The device of Claim 48, further comprising a pump connected to the area to create the pressure differential.

50/56.

The device of Claim 48, further comprising an air pump connected to the area to create the pressure differential.

51/57.

The device of Claim 56, wherein the air pump creates a positive pressure in the area relative to the exterior of the housing.

52/58.

The device of Claim 48, wherein the support is substantially flat.

53/59.

A method of dispensing liquid from an array of containers onto a support, the method comprising the steps of:

positioning an array of containers into a housing so that a first end of each container is contained in an area of the housing and a second end of each container is positioned externally of the housing;

positioning a support externally of the housing and relative to the second ends of the containers; and

creating a pressure differential between the area and the exterior of the housing so that the containers dispense liquid onto the support.

54 / 60. The method of Claim 59, wherein the containers are tubes.

55 / 61. The method of Claim 59, wherein the containers are capillary tubes having open ends.

56 / 62. The method of Claim 59, wherein creating a pressure differential between the area and the exterior of the housing includes raising a pressure in the area.

57 / 63. The method of Claim 59, wherein the support positioning step includes maintaining the containers separate from the support.

58 / 64. The method of Claim 59, wherein a pump connected to the area creates the pressure differential.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N.W.
WASHINGTON, D. C. 20005
202-408-4000